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Attn: Daniel Keary

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RPS

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Via: Mail

Dear Mr Keary

RE: TYREE BUILDING (formerly ENERGY TECHNOLOGIES BUILDING)
UNSW KENSINGTON CAMPUS (ref 09/2582)

Request for Director General's Requirements

The University of New South Wales (UNSW) is proposing to build a new Energy Technologies Building (ETB) to be known as the Tyree Building, on its campus at Kensington. The building will accommodate leading edge research facilities in key energy areas, including photovoltaics, carbon capture and storage, oil and gas reservoir characterisation, carbon trading, nanomaterials and policy and market analysis.

On 10 August 2009, UNSW sought the Minister's declaration that the ETB proposal was one to which Part 3A of the EP&A Act applied. On 25 August 2009, the Minister formed the opinion that the proposal is a Major Project under Part 3A of the EP&A Act, as it is of a kind described in Schedule 1, Group 7 Clause 20 of the State Environmental Planning Policy (Major Development) 2005.

Director General's Requirements (DGRs) for the Project are now being sought. To assist in the preparation of the DGRs, this submission includes the following information:

- an outline of the proposal
- an overview of the relevant planning framework, and
- a preliminary assessment of the environmental issues associated with the proposal.

1. Proposal Outline

The Tyree Building will be the first stage of a redevelopment of the Kensington Campus for the Faculty of Engineering. Over the next 10-15 years, the faculty will be relocated from its existing 1960s buildings into new and refurbished accommodation in a major redevelopment of the lower campus.

Francis-Jones Morehen Thorp (FJMT) has been appointed to design the Tyree Building. Their initial design concept is currently being further developed with input from stakeholders and other consultants. The latest plans are at Attachment A. The images below (Figures 1- 6 prepared by FJMT Architects) illustrate the preliminary design of the building.

The Tyree Building will consist of five and a half floor levels totalling approximately 15,000m² of gross building area, including a lower ground/semi-basement level. The building will incorporate administrative spaces, teaching and learning spaces, engineering workshops, engineering display spaces, a cafe, and research areas with laboratories. The roof of the building will incorporate photovoltaic cells for testing of research and development work as well as contributing to the energy input requirements of the facility.



A central atrium space with access stairs and pedestrian bridges will connect the floor levels through the full height of the building to increase visual and physical interconnection and enhance the collaborative nature of the design.



Figure 1 – Anzac Parade (western) Elevation



Figure 2 - University Mall (northern) Elevation



Figure 3 – Social Hub



Figure 4 – Internal Perspective of proposed building through atrium

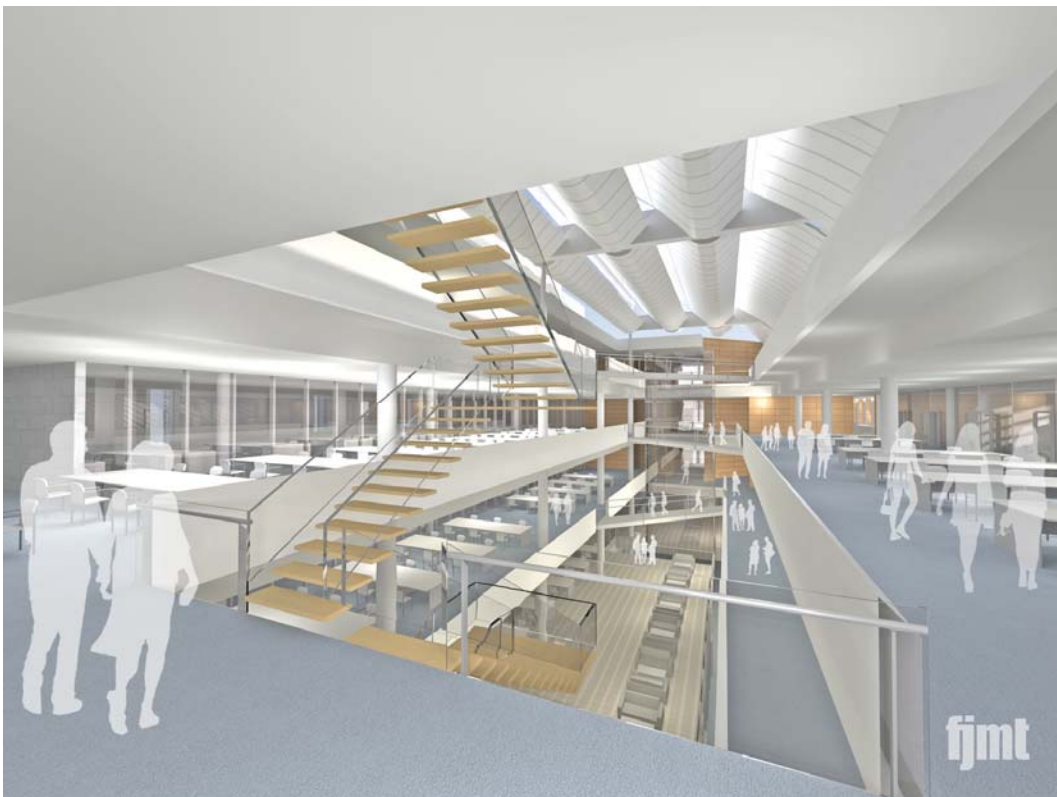


Figure 5 – Atrium



Figure 6 – Foyer

The design of the building will aim to achieve a 5 to 6 Star Green Star Rating from the Australian Green Building Council of Australia.

A summary of the initial design concept by FJMT Architects is set out in the table below.

Gross Building Area (m ²)	15,142
Number of Floors	6 + Roof Plant
Height of Building	Varies, average maximum RL 51.40
Gross Building Area Per Floor (m ²)	
Basement(s)	3,250
Ground Floor	2,213
Level 1	2,734
Level 2	2,718
Level 3	2,616
Level 4	1,176
Level 5 Roof Plant	435
Space Breakdown (useable floor area m ²)	
Academic	
Offices	1,520



Research Laboratories	2,680
Lecture Theatres	311
Specialised teaching spaces	480
Other research spaces	1,790
Administration	1,294
Offices	12
Plant	
Plant room	2,502
Commercial	
Food Services	110
Social hubs	215
Other (lobby)	451

2. Site Description

The site is located on the UNSW Kensington Campus at the junction of University Mall and Anzac Parade (see Figure 7). It is located to the north of New College and west of Sam Cracknell Pavilion and the Village Green. The proposed Tyree Building will have a role both as a gateway building to the campus and as a landmark building for the Faculty of Engineering and UNSW generally.

A key component of the design of the Tyree Building is to ensure that it will preserve and enhance the existing landscape character of University Mall, which is one of the most significant campus environments in Australia, in particular the existing trees, paving and Spooner's Wall. The site is currently improved by four tennis courts and a grounds depot.

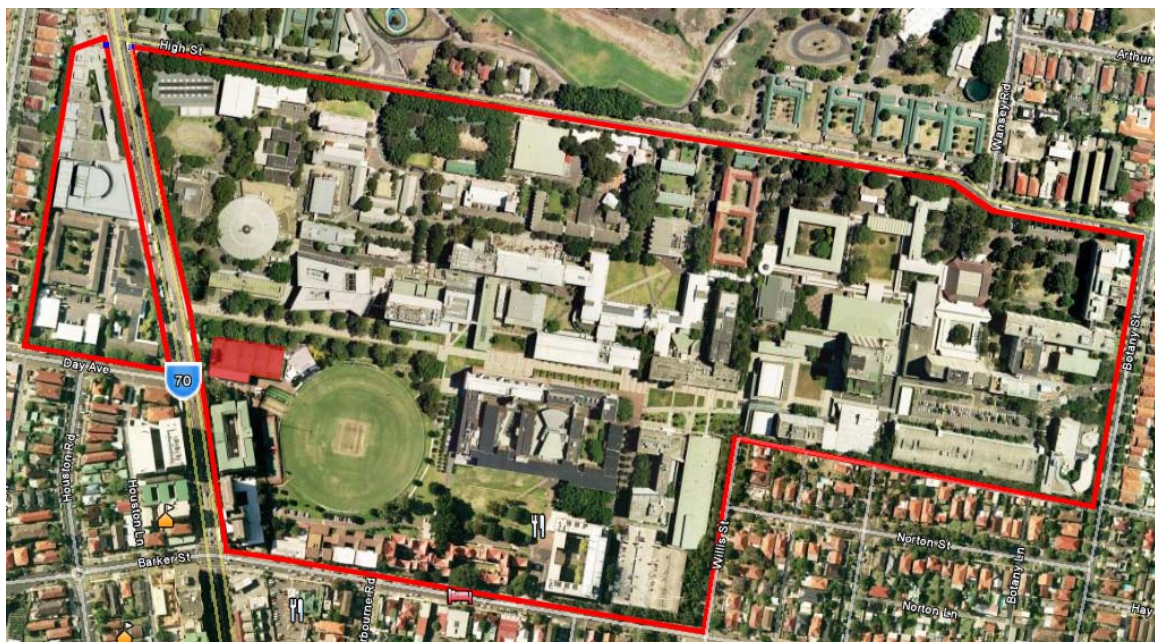


Figure 7 – Location of ETB (shaded red) within UNSW Kensington Campus (source: Google Earth)



3. Planning Controls

The following planning instruments are relevant to the proposed development.

- State Environmental Planning Policy (Major Development) 2005
- State Environmental Planning Policy (Infrastructure) 2007
- State Environmental Planning Policy 55 – Remediation of Land
- Randwick Local Environmental Plan 1998
- University of NSW Kensington Campus Development Control Plan

Kensington Campus is zoned Special Uses under the Randwick Local Environmental Plan 1998 (RLEP 1998). The Special Uses zone allows the University to operate and develop the campus as an *educational establishment* together with ancillary development. The proposed works are permissible under RLEP 1998.

There are few other controls contained within the RLEP 1998 which are applicable to development at Kensington Campus. In terms of urban design controls such as height, scale, character and alignment of buildings, the LEP places no restrictions within the Special Uses Zone for the proposed redevelopment. These detailed controls are set out in the University of NSW Kensington Campus Development Control Plan (DCP). Chapter 5 of the DCP contains the key controls. Those of relevance to the proposal include the following.

- Section 5.2: Sense of Place
- Section 5.3: Legibility
- Section 5.5: Landscape (and in particular existing trees and entry points)
- Section 5.6: Buildings
- Section 5.7: Housing
- Section 5.8: Retail and Services
- Section 5.9: Recreation and Cultural Facilities & Events
- Section 5.10: Transport and Parking

The proposed development is generally consistent with the DCP, however there are a number of minor non-compliances, which will be addressed in the environmental assessment. These include view corridors, campus connections, entries, building alignment, potential/possible uses, recreational facilities and car parking. These are addressed further below.

View Corridors

Figure 5.2 of the DCP identifies a potential view line from Day Avenue (opposite the site, across Anzac Parade) extending adjacent to the subject site through to the Village Green. Figure 5.1 of the DCP shows and campus entry in this location. The view line is currently impacted upon by existing landscaping to the north of New College, some of which will remain unaffected by this proposal. The current building alignment extends a little over the projected kerb line of Day Avenue. However, a view line to Village Green will remain. A campus pedestrian entry is proposed in this location.

Figure 5.2 also identifies a view corridor from High Street (along International Road) terminating at University Mall and the proposed Tyree Building. Figure 5.3 of the DCP identifies this as a north-south connection along International Road, adjacent to the site of the proposed building through to Barker Street. While there would be some minor impact on the location of this connection, access is proposed between the building and Sam Cracknell Pavilion.

Uses

Figure 5.10 of the DCP identifies the site as *proposed campus housing*. This is one of a number of sites, where it was envisaged that housing could occupy upper levels of mixed use buildings. The proposal is for a low rise academic building with a café at ground level and teaching space at lower ground,



consistent with the *public room* designation in Figure 5.4 of the DCP. Although Section 5.8 of the DCP states that new retail is to be predominantly located within identified campus hubs, it allows limited retail (such as cafes) outside the hubs.

Recreational Facilities

Section 5.9 of the DCP notes the need for recreational facilities. The environmental assessment will address loss of the tennis courts located on the subject site. It is proposed to relocate the tennis courts to an alternative UNSW site.

Car parking

The proposal does not include provision for car parking, which will be addressed in the application. This approach is consistent with the UNSW Transport Strategy outlined in Section 5.10 and Figure 5.12 of the DCP.

4. Preliminary Assessment

This information has been compiled to assist in the preparation of the Director General's Requirements for the Environmental Assessment to accompany the Project Application.

The key environmental considerations associated with the proposed development are listed below. Specialist studies will be undertaken as part of the proposal to assist in addressing these issues.

- Consistency with planning controls
- Infrastructure
- Transport, access and car parking
- Built form and visual impacts
- Waste management
- Sustainability
- Dangerous Goods handling and storage
- Acoustic impacts
- Air quality impacts
- Landscaping and Impacts on Trees
- BCA Compliance
- Waste Management
- Contamination and Geotechnical
- Impacts during construction

Consistency with Planning Controls

As noted above, the key local planning controls applying to the site are in the RLEP 1998 and the UNSW Kensington Campus DCP. The proposed development is consistent with the zoning objectives and is permissible with consent, and is generally consistent with the DCP. The proposal will result in some minor non-compliances with the DCP controls, however it is anticipated that these can be adequately justified such that they will not have a major impact on both this and other development at the campus.

Infrastructure

The site is currently serviced by electricity, gas, sewer, water, stormwater and telecommunications. The adequacy of these to service the proposed development will be assessed and any necessary relocations or upgrades will be determined.

Transport, Access and Car Parking

A traffic report will be prepared for the proposed development, which will assess traffic generation, car parking, access arrangements and circulation. As the subject site does not currently include any car parking and the likely population increase resulting from the proposal is anticipated to be minor, additional car parking is not proposed. This will be detailed in the traffic report.



Built Form and Visual Impacts

As identified above the proposed building is to be five and a half floors, including a lower ground/semi-basement level. The proposed height and scale of the building is not only consistent with surrounding development and landscape but has been designed to respond to the site's unique features and attributes. Design principles have been developed to guide the design process. The visual impact of the building and any overshadowing will be assessed as part of the Environmental Assessment.

Waste Management

The proposed development will generate a variety of solid and liquid waste materials, including municipal solid waste and other specialised wastes. Hazardous wastes may also be generated. An assessment of waste management facilities, as well as treatment of construction wastes, will be undertaken as part of the assessment.

Sustainability

The proposed building aims to achieve a minimum 5 Star (and if feasible, 6 Star) Green Star Rating from the Green Building Council of Australia (GBCA). An ESD rating report will be prepared which will assess the proposed building against the GBCA credit criteria goals.

Drainage and Stormwater Management

Drainage and stormwater management on the site will be in accordance with the UNSW Stormwater Strategy, which was prepared in consultation with Randwick City Council. This will be detailed in a stormwater and drainage concept plan for the proposal.

Dangerous Goods Handling and Storage

The proposed development will involve the use and storage of a range of dangerous goods for use in research and teaching laboratories. UNSW has established policies and procedures for minimising the risk of environmental impacts arising from the handling and storage of these materials. The application of these policies and compliance with relevant NSW regulations will be addressed in the environmental assessment.

Acoustic Impacts

No significant acoustic impacts are expected as part of the proposal. Aside from normal noise associated with the operation of an educational facility, the only other sources of noise are expected to be in relation to the air-conditioning plant.

Air Quality Impacts

The dispersion of gases from the building will be addressed as part of the proposal. A dispersion study will be undertaken to identify likely impacts under various weather conditions, and in the case of an accident.

Landscaping and Impacts on Trees

The proposal may include the removal of small number of trees along Anzac Parade and along the southern edge of the site adjoining New College. An aborist's assessment will be undertaken to determine likely impact on all of the trees in the vicinity of the proposed building.

A landscape concept plan will also be prepared as part of the proposal. In particular, the landscape concept will address impacts on University Mall, a significant and symbolic area of open space within the UNSW Kensington Campus. The retention of the existing landscape and mature trees is a key element of the project.



BCA Compliance

The proposed development will comply with the relevant provisions of the BCA. A compliance report will form part of the Environmental Assessment.

Contamination and Geotechnical

A Phase 1 contamination investigation will be prepared to assess whether remediation of the site (and groundwater) is required prior to development. Geotechnical investigations will also be undertaken to determine the soil and groundwater conditions present on the site.

Construction Impacts

Construction impacts associated with the proposal will be addressed in a Construction Environmental Management Plan (CEMP), which will be prepared by the appointed construction contractor prior to the commencement of development. The Environmental Assessment will provide a framework of the CEMP, which will illustrate the issues to be covered in the final CEMP, including (where relevant):

- erosion and sediment control
- hazardous substances/dangerous goods
- asbestos (and hazardous building material)
- waste
- contaminated soil and water
- noise and vibration
- air quality
- tree protection
- consultation/participation
- sustainability
- construction management
- staging, and
- site management.

5. Conclusion

This submission provides information to assist in the preparation of DGRs for the ETB project, the Tyree Building. The issues discussed in this report are considered to represent the key environmental considerations associated with the proposal.

Should you require further information or wish to discuss this matter further, please do not hesitate to contact Silvija Smits at Conics on TEL 8270 8300.

Yours faithfully
Conics (Sydney) Pty Ltd

Silvija Smits
Senior Partner

Attachments
Preliminary Plans (prepared by FJMT Architects)